disorder (OR 20.1: CI 12.3-33.1) significantly increased the use of antipsychotic medication in children with ADHD. **CONCLUSIONS:** Stimulants remained the mainstay of treatment for ADHD in children, although its use decreased after 2006 which is consistent with other studies. Antipsychotic use was less common but increased significantly in recent years.

PMH12

IMPACT OF POLYDRUG USE ON PRESCRIPTION DRUG ABUSE

Parikh NS, Nayak R
St. John's University, Jamaica, NY, USA

OBJECTIVES: Prescription drug abuse has emerged as a major public health threat over the past decade. The role of polydrug use (PDU) of psychotherapeutic drugs is currently not well understood in prescription drug abuse (defined as nonmedical use of prescription drugs-NMUPD). This study aims to characterize NMUPD and examine the role of PDU in contributing to prescription drug abuse. **METHODS:** The National Survey of Drug Use and Health (NSDUH-2010) was utilized to study a population of noninstitutionalized, civilian Americans, aged 12 years and over for NMUPD. NMUPD was defined as the act of consuming a drug from any of the four drug classes (pain relievers, stimulants, tranquilizers and sedatives) without a valid prescription or with a prescription for the experience or feeling it caused. PDU was defined as the use of two or more prescription psychotherapeutic drugs within the past one year. Associations between PDU and NMUPD were tested with respect to demographic and socio-economic factors. **RESULTS:** Out of a sample of 5166 individuals who were taking psychotherapeutic drugs, about 29% (n=1493) were engaged in PDU. About 4.47% (n=231) of the sample fit the criteria for NMUPD. About 6.50% (n=97) of the PDU sample (n=1493) were engaged in NMUPD. NMUPD was found to be more common among polydrug-users than monodrug-users (6.5% vs. 3.65%). A Chi-Square test for independence showed a significant association between PDU and NMUPD (χ2=20.167, p<0.0001). Demographically, a majority of the polydrug-users with NMUPD were in the age-group 18-25 years (55%), female (54.64%), single (83.51%), nonhispanic white (77.32%), with high school graduation (60.82%) and income less than $10,000 annually (68.04%). **CONCLUSIONS:** PDU is a notable and legitimate risk factor for NMUPD. NMUPD among polydrug-users appears to be more prevalent in a population that is young, mostly female, nonhispanic white, with limited income and education.

PMH13

PREDICTORS OF USE OF ATYPICAL ANTIPSYCHOTICS AND LONG ACTING STIMULANTS POLYPHARMACY AMONG CHILDREN AND ADOLESCENTS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

Bali V, Kamble P, Aparasu RR
University of Houston, Houston, TX, USA

OBJECTIVES: Psychotropic polypharmacy is common in pediatric Attention Deficit/Hyperactivity Disorder (ADHD). This study examined determinants of the long acting stimulant (LAS) and atypical antipsychotic (AAP) polypharmacy in children and adolescents with ADHD. **METHODS:** This study used 4 years (January 2004 to December 2007) of IMS LifeLink™ claims data involving 6-16 years old children with ADHD and at least one LAS prescription between July 2004 to December 2006 and continuous eligibility 6 months before and 1 years after the index LAS prescription. Polypharmacy was defined as the concurrent prescription for LASs and AAPs for at least 14 days within the 365 days after the index LAS claim. Multiple logistic regression analysis was performed to examine predictors of LASs and AAPs polypharmacy in pediatric ADHD. **RESULTS:** The study cohort consisted of 39,981 children and adolescents. Of these, 1,560 (3.90%) received LAS and AAP polypharmacy and the rest 38,421 (96.10%) received LAS monotherapy. Multivariate logistic regression analysis revealed that factors positively associated with psychotropic polypharmacy were: male, year of cohort entry (2005 and 2006), initiation of LAS in summer, psychiatrist visit, depression, conduct disorder, enuresis, tics, bipolar disorder, oppositional disruptive disorder, psychosis and pervasive developmental disorders, use of psychotropic medications from other drug class such as α2-agonists, antidepressants, mood stabilizers and other miscellaneous medications, and mental health-related hospital visit in the past 6 months. Children with public health insurance, those residing in Midwest and West regions, those who initiated use of index LAS in spring, those seen by pediatrician, and those with comorbidity of substance abuse and dependence were less likely to receive LAS and AAP polypharmacy. **CONCLUSIONS:** Various patient, clinical and treatment factors were associated with the receipt of polypharmacy among ADHD youths. Understanding of these factors can help to manage psychotropic polypharmacy and improve quality of care in pediatric ADHD.

PMH14

CONCURRENT STIMULANT AND ATYPICAL ANTIPSYCHOTIC USE AMONG MEDICAID CHILDREN AND ADOLESCENTS WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER

Kamble P[1], Aparasu RR[1], Chen H[1], Johnson ML[1], Abughosh S[1], Bhatara V[2]
[1]*University of Houston, Houston, TX, USA,* [2]*University of South Dakota, Sioux Falls, SD, USA*

OBJECTIVES: The study examined the prevalence and factors associated with concurrent use of long acting stimulants (LAS) and atypical antipsychotic agents among children and adolescents who initiated LAS medications for Attention Deficit/Hyperactivity Disorder (ADHD). **METHODS:** The study involved retrospective longitudinal analysis of 2003-2007 Medicaid Analytical eXtract (MAX) data of four US states. The study focused on children and adolescents aged 6 to 17 years, diagnosed with ADHD, and who initiated LAS from July 2003 to December 2006. Concurrent use was defined as receipt of both medications together at least for 14 days. The study cohort was followed uniformly for one year after the initiation of LAS medications to examine the concurrent use. Descriptive analysis was conducted to examine the utilization pattern. Multiple logistic regression analysis within the conceptual framework of Andersen behavioral model was conducted to examine determinants of concurrent use with LAS use only as a reference group. **RESULTS:** Among the 61,793 children and adolescents who initiated ADHD treatment with LAS, 11, 866 (19.20%) received LAS and atypical antipsychotics concurrently. Risperidone was frequently used concurrently with LAS in children. The multiple logistic regression revealed that children and adolescents with male gender, black race, and foster care benefits were more likely to receive LAS and atypical antipsychotics concurrently than their counterparts. Moreover, FDA approved indications such as schizophrenia, bipolar disorder, and psychosis and non-approved indications such as oppositional defiant disorder, pervasive developmental disorder, tic disorder, and personality disorder determined the concurrent use. **CONCLUSIONS:** Almost 1 in 5 children and adolescent received LAS and atypical antipsychotics concurrently. In addition to FDA approved indications, non-approved indications determined the concurrent use. There is urgent need to evaluate the safety and efficacy of concurrent use of LAS and atypical antipsychotics in children and adolescents for various indications.

PMH15

PREVALENCE OF DEPRESSIVE SYMPTOMS AND PREDICTORS OF TREATMENT AMONG ADULTS FROM 2005 TO 2010 IN THE UNITED STATES

Wittayanukorn S, Qian J, Hansen RA
Auburn University, Auburn, AL, USA

OBJECTIVES: Depression is a major public health concern with significant patient and societal burden. However, many patients with depressive symptoms do not receive treatment. This study examined nationally representative estimates of the prevalence of depressive symptoms and factors associated with treatment. **METHODS:** A cross-sectional, retrospective analysis of adults age ≥18 represented in the 2005-2010 National Health and Nutrition Examination Survey (NHANES) data (n=15,838; weighted n=194,685,449) who responded to the Patient Health Questionnaire (PHQ-9) was conducted. Depressive symptoms were defined by PHQ-9 score ≥5. Depression treatment was defined as receiving either antidepressants or psychotherapy. Multivariate logistic regression analyses using population weights were performed to identify factors associated with having depressive symptoms. Among the group of patients with moderate to severe depression, similar models assessed factors associated with receipt of treatment. **RESULTS:** The prevalence of depressive symptoms increased gradually from 2005-2010 (21.4% in 2005-2006; 25.6% in 2007-2008; and 26.1% in 2009-2010). Among patients with moderate to severe depressive symptoms, over one-third (weighted n=6,132,302; 37.0%) received either antidepressants or psychotherapy treatment. Multivariate results found that comorbidities (high blood pressure, diabetes, asthma, arthritis, heart failure, stroke, COPD, and obesity), previous hospitalization, having no health insurance, seeing a mental professional, receiving antipsychotic drugs, female, Hispanic ethnicity, in poverty status, and age of 20-59 (vs. age <20) were significant factors associated with having depressive symptoms (P<0.05). Among patients with moderate to severe depression, comorbidities (asthma and cancer), seeing a mental professional, receiving antipsychotic drugs, female, and Non-Hispanic White race were statistically significantly associated with receipt of treatment (P<0.05). **CONCLUSIONS:** Although the prevalence of depression symptoms is high and growing in the U.S. population, only a small portion of patients with moderate to severe depression received treatments. Additionally, significant disparities by ethnicity and use of mental professionals appear to be associated with the likelihood of receiving treatment.

PMH16

IMPACT OF ATYPICAL ANTIPSYCHOTIC USE ON THE PERSISTENCE OF THE STIMULANT TREATMENT IN CHILDREN AND ADOLESCENTS WITH ATTENTION DEFICIT/HYPERACTIVITY DISORDER

Kamble P[1], Aparasu RR[1], Chen H[1], Johnson ML[1], Abughosh S[1], Bhatara V[2]
[1]*University of Houston, Houston, TX, USA,* [2]*University of South Dakota, Sioux Falls, SD, USA*

OBJECTIVES: To examine the impact of atypical antipsychotic use on the persistence of long acting simulants (LAS) in children and adolescents with Attention Deficit/Hyperactivity Disorder (ADHD). **METHODS:** The study involved retrospective longitudinal analysis of 2003-2007 Medicaid Analytical eXtract (MAX) data of four US states. The study focused on children and adolescents aged 6 to 17 years, diagnosed with ADHD, and who initiated LAS after 6 months washout period. Concurrent use was defined as receipt of both medications together at least for 14 days. The persistence of LAS was defined as number of days to discontinuation of index LAS. The patients were censored at the discontinuation of index LAS or end of study period whichever comes first. Descriptive analysis was used to examine demographic, service related, and clinical characteristics of study sample. Accelerated Failure Time (AFT) regression was conducted to examine the determinants of persistence of LAS. **RESULTS:** Among the 61,793 children and adolescents who initiated LAS for ADHD 9,902 (16.03%) received LAS and atypical antipsychotic concurrently. Most of the study sample was children aged between 6-12 years, males, and whites. The mean duration of LAS treatment was longer (200 days) among concurrent users than only LAS users (143 days). The AFT regression found that concurrent users had 45% longer (STR, 1.45; 95% CI, 1.41-1.49) LAS persistence than those using LAS only. Adolescents and non-whites had shorter LAS treatment persistence than their counterparts after controlling for demographics, service related, and clinical factors. **CONCLUSIONS:** The concurrent users had longer LAS treatment continuity than LAS only users. The addition of the atypical

antipsychotic agents to LAS treatment may be beneficial in improving treatment persistence in ADHD.

PMH17

PREVALENCE OF DEPRESSION IN A WEST AFRICAN COUNTRY:EVIDENCE FROM WORLD HEALTH SURVEY

Agarwal P[1], Haile Z[2], Sambamoorthi U[1]
[1]*West Virginia University School of Pharmacy, Morgantown, WV, USA,* [2]*West Virginia University School of Public Health, Morgantown, WV, USA*

OBJECTIVES: As in many other developing countries of the world, mental health research in Ghana has received little attention. The epidemiology of the disease and the actual prevalence in the general population are virtually unknown. Few small scale studies have identified factors associated with depression in the country. Nonetheless, because of their limited scope, quality and scale of these studies, there remains a gap in knowledge regarding factors associated with depression in a general population. Therefore, the purpose of the study is to examine the prevalence of self-reported depression among adults (age > 18) and analyze the association between demographic, socio-economic, health conditions, and life-style practices and presence of depression in a West African country (Ghana) using 2002 World Health Survey. **METHODS:** Cross-sectional design was used. Data were extracted from the World Health Survey for the year 2002. Based on an algorithm developed by Ayuso-Mateos and colleagues using World Health Survey, we combined depressive episode, brief episode and subsyndromal depression to measure presence of depression. Chi square statistics and logistic regressions were utilized to examine the relationship between self-reported depression and demographic, socio-economic, health conditions, and life-style practices in Ghana. **RESULTS:** Overall, 11.9% adults reported depression. Logistic regression on presence of depression revealed that women were more likely to have depression compared to men (AOR = 1.46, 95% CI = 1.13, 1.89). Among other factors, those with chronic conditions (arthritis and heart disease) were more likely to have depression compared to those without these conditions. **CONCLUSIONS:** This study confirms the gender differences in prevalence of depression. The relationship between chronic conditions and depression highlights the need for medical and behavioral treatment integration in Ghana.

PMH18

LOGISTIC REGRESSION TO IDENTIFY THE FACTORS PREDICTING THE LIKELIHOOD OF LURASIDONE INITIATION IN A EMPLOYER DATABASE IN THE UNITED STATES

Rajagopalan K[1], Kleinman NL[2], Brook RA[3], Cape AP[4], Smeeding JE[5], Loebel A[6]
[1]*Sunovion Pharmaceuticals, Inc., Marlborough, MA, USA,* [2]*The HCMS Group, Cheyenne, WY, USA,* [3]*The JeSTARx Group, Newfoundland, NJ, USA,* [4]*HCMS Group, Cheyenne, WY, USA,* [5]*The JeSTARx Group, Dallas, TX, USA,* [6]*Sunovion Pharmaceuticals, Inc., Fort Lee, NJ, USA*

Objective: To predict the demographic, diagnostic, comorbid, and drug utilization factors that may impact the likelihood of subjects initiating lurasidone among US employers. **Methods:** Analyses of administrative claims data from the HCMS Database comprised of multiple large geographically dispersed US employers from 2/1/2011(lurasidone launch) through 9/30/2012. All continuously enrolled subjects with a schizophrenia or bipolar disorder diagnosis with a prescription claim of lurasidone were classified as lurasidone subjects; those without a lurasidone prescription claim were controls. Demographics, Charlson comorbidity index (CCI) score, specific bipolar disorder or schizophrenia diagnoses, and use of atypical antipsychotics were described using means for continuous variables and proportions for categorical variables. Factors predicting the likelihood of initiating lurasidone were evaluated using stepwise logistic regression. **Results:** From a total of 127 lurasidone subjects and 7754 controls, 43 lurasidone subjects (1.1%) and 3822 control subjects were eligible for analysis with 40.4% employees, 31.2% spouses, and 28.4% dependents. The employees/spouses were 67% female, mean age 44.1 (SD=10.8) years and mean CCI score of 0.72 (SD=1.42). Dependents were 49% female, with mean age 20.7 (SD=7.4) years and mean CCI score of 0.27 (SD=0.72). The most commonly used atypical antipsychotics were: aripiprazole=18.6%, quetiapine=18.3%, risperidone=11.6%, olanzapine=6.2%, and ziprasidone=5.7%. Logistic regression found subjects with schizoaffective disorder (ICD-9=295.7x, OR=3.6, P=0.0023); use of paliperidone (OR=7.8, P<0.0001), ziprasidone (OR=5.3, P<0.0001), or aripiprazole (OR=2.1, P=0.0233); and younger ages (OR=0.97, P=0.0244) were more likely to initiate lurasidone. **Conclusion:** This analysis suggests that subjects with schizoaffective disorder and paliperidone, ziprasidone, aripiprazole use were >2 times as likely to take lurasidone compared to controls. Additionally, younger subjects were more likely to take lurasidone.

PMH19

MENTAL COMORBIDITY AND IN-HOSPITAL MORTALITY AMONG PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

Sohn M, Moga DC, Talbert J
University of Kentucky, Lexington, KY, USA

OBJECTIVES: This study examines whether mental comorbidity affects in-hospital mortality among individuals with acute myocardial infarction (AMI). The present study uses nationally representative data and provides insight for understanding the impact of mental comorbidity on in-hospital outcomes among individuals with AMI. **METHODS:** The Nationwide Inpatient Sample (NIS) database of the Health Care Cost and Utilization Project (HCUP) for 2010 was used to identify cases where the primary diagnoses at discharge was AMI (ICD-9-CM; 410.XX). Mental comorbidity cases were identified as discharges with 1 or more mental disorders (ICD-9-CM; 290.XX-319.XX) listed as the non-primary diagnosis. The impact of mental comorbidities on in-hospital mortality was evaluated using Cox proportional hazards regression. **RESULTS:** A total of 232,813 cases with AMI were included in the analysis. Of these, 112,327 (48%) had at least one diagnosis of a mental comorbidity. According to the Cox proportional hazards estimation result, the presence of mental comorbidity significantly increases the probability of having in-hospital death (Hazard Ratio: 1.34, 95% CI: 1.23–1.46). **CONCLUSIONS:** Our results suggest that mental conditions could increase in-hospital mortality among individuals with AMI. Whether having mental comorbidities is *per se* a risk factor for in-hospital mortality post-AMI or is a proxy for other unmeasured factors needs further investigation. Regardless, our finding suggests that presence of mental comorbidities should be accounted for when treating patients.

PMH20

EXCESS RISK OF CHRONIC PHYSICAL CONDITIONS ASSOCIATED WITH OBESITY AND COMMON MENTAL HEALTH CONDITIONS: DEPRESSION AND/OR ANXIETY

Bhattacharya R[1], Sambamoorthi U[2]
[1]*West Virginia University, Morgantown, WV, USA,* [2]*West Virginia University School of Pharmacy, Morgantown, WV, USA*

OBJECTIVES: This study examined, if presence of depression and/or anxiety confer additional risk for chronic physical conditions in the presence of obesity. **METHODS:** We used a retrospective cross-sectional study design. Study participants were 32,251 adults aged 22-64 years from 2007 and 2009 Medical Expenditure Panel Survey. Body mass index values (BMI) were used to classify sample adults into normal, overweight, and obese categories. Presence of depression and/or anxiety and BMI were combined to classify participants into six categories: 1) No depression and/anxiety and normal BMI;2) No depression and/anxiety and overweight; 3) No depression and/anxiety and obese; 4) Depression and/or anxiety and normal BMI; 5) Depression and/or anxiety and overweight; 6) Depression and/or anxiety and obese. Binary outcome variables indicating presence/absence of asthma, arthritis, diabetes, gastro esophageal reflux disease (GERD), chronic obstructive pulmonary disorder, hypertension, heart disease, osteoporosis, and thyroid disorders, were outcome measures. Exponentiated coefficients from two separate complementary log-log regressions were used to determine the risk of chronic physical conditions in presence obesity and depression and/anxiety. We tested the independent association of depression and/or anxiety with risk of chronic physical conditions by specifying two contrasts using the following reference groups 'no depression and no anxiety with obesity' and 'no depression and no anxiety and normal BMI' in two separate regression models. **RESULTS:** Among individuals with obesity, those with depression and/or anxiety were at higher risk of having chronic physical conditions (except osteoporosis) compared to individuals with no depression and no anxiety. The Adjusted Risk Ratios (ARRs) ranged from 2.07 (95% CI: 1.73, 2.48) for GERD to 1.29 (95%CI: 1.07, 1.56) for asthma. Among individuals with normal BMI, those with depression and/or anxiety were at higher risk of having chronic physical conditions compared to individuals with no depression and no anxiety. The ARRs ranged from 2.30 (95%CI: 1.69, 3.13) for GERD to 1.44 (95%CI: 1.22, 1.69) for arthritis. **CONCLUSIONS:** Presence of depression and/or anxiety conferred an independent risk for having chronic physical conditions after regardless of BMI categories.

MENTAL HEALTH – Cost Studies

PMH21

BUDGET IMPACT ANALYSIS OF QUETIAPINE VERSUS ARIPIPRAZOLE OR OLANZAPINE ON THE TOP OF STANDARD THERAPY IN THE TREATMENT OF BIPOLAR DISORDER IN RUSSIAN FEDERATION

Kulikov A, Komarov I
I.M. Sechenov First Moscow State Medical University, Moscow, Russia

OBJECTIVES: To estimate the budget impact of the inclusion of quetiapine compared to aripiprazole or olanzapine on the top of standard bipolar disorder treatment scheme with atypical antipsychotics according to Russian health care system. **METHODS:** The one year budget impact analysis was conducted. Direct expenses associated with bipolar disorder and resulting follow-up costs were calculated using general tariff agreement of Russian obligatory insurance system and official national statistics. For reference, accepted exchange rate was 1 EUR = 40 RUB. **RESULTS:** Quetiapine inclusion into the standard bipolar disorder therapy provided cost saving benefits compared with inclusion of aripiprazole or olanzapine in the bipolar disorder standard therapy scheme. Total health care costs of bipolar disorder therapy were approximately 396 539 RUB (9,913 EUR) per patient in quetiapine group, 1,023 089 RUB (25,577 EUR) per patient in aripiprazole group and 557,222 RUB (13,931 EUR) per patient in olanzapine group within one year. Treatment of bipolar disorder using standard therapy with quetiapine inclusion compared to one with aripiprazole or olanzapine leads to cost savings of 626,551 RUB (15,664 EUR) or 160,683 RUB (4,017 EUR) per patient-year, respectively. **CONCLUSIONS:** The results of budget impact analysis illustrate that including quetiapine into the standard therapy of bipolar disorder in comparison with aripiprazole or olanzapine has potential to reduce Russian health care system total costs for bipolar disorder treatment.

PMH22

ANALYSIS OF PERSISTENCE AND HEALTH CARE COSTS IN THE US MEDICAID POPULATION OPIOID-DEPENDENT PATIENTS TREATED WITH BUPRENORPHINE/NALOXONE FILM AND TABLET FORMULATIONS

Kharitonova E[1], Aballea S[1], Clay E[1], Ruby J[2], Zah V[3]
[1]*Creativ-Ceutical, Paris, France,* [2]*Reckitt Benckiser Pharmaceuticals, Inc./NA, Richmond, VA, USA,* [3]*ZRx Outcomes Research Inc., Mississauga, ON, Canada*